Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

machinery what can only be done by hand. In the latter case you try to make a machine do a man's work, which is impossible. In the former you make a man do a machine's work, which is immoral. Whatever can be done (that is properly done) by machinery, ought to be done by machinery. The present system combines both evils. But what is needed is not to join the ranks of the machine-breakers, but to draw the line rightly between mechanical and non-mechanical production. Some critics are fond of saying that we make nothing well but the instruments of war. They omit one class of appliances, the instruments of science. A compound microscope of the present day is one of the greatest triumphs of intellect in workmanship that the world has ever seen."

Beauty, in a word, is only a higher usefulness—utility seen at arm's length. Life without industry may or may not be guilt, but industry without art is certainly brutality. The aim of art is not only to tell the true thing but to adorn the useful one. Anything which is well adapted to its purpose is on the verge of becoming beautiful. The idealization of industrial activities and objects in art forms means that they are to be humanized, socialized, and generalized in their cosmic significance. The limitation of industrial art as it is carried on by the artisan, usually through no fault of his own, is that he does not see the cultural value of what he is doing: he is ignorant of the relation of the particular manipulations which he is compelled to make to the other steps in the process and to the finished product. The artisan may become an artist only by coming to see the significance of what he is doing in relation to the nature of the materials with which he is working and in relation to the uses to which the product is to be put in the total life of society. This is all that is necessary to bring out that instinct of workmanship which is the very essence of the creations of fine art. If socialism will do this for industry, as Mr. H. G. Wells thinks, then socialism will inaugurate a new era of fine art.

H. HEATH BAWDEN.

SAN YSIDRO, CALIFORNIA.

PRAGMATISM AND SOCIAL SCIENCE

THE field now occupied by the social sciences, morality, logic and philosophy was in the eighteenth century regarded as one discipline and discussed from a single viewpoint. Out of the common traditions of this old moral philosophy the various social sciences and types of philosophy have arisen. There are many views in the various fields that show the influence of the common background from which they were all derived, yet the specialization invoked by the example of the physical sciences has produced the dominant tendencies found in them. Each group has its own associations and organs, goes its own way, and sets its own standards. This isolation has brought some advantages and many evils. To divide a common field into parts leads to accurate knowledge of details, but it destroys the basis on which action depends. There is but one society and all are parts of it. Any conclusions we draw apply to the whole society and are verified in the daily actions of men, not penned up within some narrow precinct.

It is the emphasis of premises instead of consequences that has divided the old moral philosophy into so many parts. Each so-called science has its special premises from which, by a chain of reasoning, an artificial man, society, or nature is constructed. The so-called economic man and the economic society in which he is supposed to exist are good illustrations of this tendency. Each special science has such an artificial man and views society in the same cramped way. There is no other manner in which premises can be traced and made to seem as dominant as is demanded by the special science in question.

This emphasis of premises is due to the success of Newton's proof that gravitation is the cause of the movement of the heavenly bodies. All the scientists of the latter part of the eighteenth century were filled with wonder at the boldness of this generalization and sought through a corresponding premise to attain the same result in their field. Kant was as much under the influence of this idea as were Ricardo and Comte. Modern rational tendencies could not have arisen but for Newton and his law. As a result we have the isolation now manifested in the various social sciences and philosophy, each with a creed and none with the power to survey the whole field of human action. Physical science can isolate and experiment; social science can not. It must therefore begin with consequences and move back to origins. A comprehensive view is the only one that can successfully carry through this reverse movement.

The present situation is made for us by these facts. The prime obstacle to future progress is the isolation of workers into special groups, each with premises of which they feel sure, but with few conclusions of import to the great social unit of which we are parts. Against this isolation of workers a reaction has set in, with the result that in each field there are insurgents in revolt against conclusions drawn from the meager data that each special science affords. The contrast of "stand-patters" and insurgents, now so familiar in politics, represents the attitude found in every science. The conservatives rejoice in the emphasis of old truth and hold rigidly to the divisions that the past century has devised. The insurgents, however, are partly held by the charm of the old thought, and yet so discontented that they break through its logic and reject its data at particular points. It is the weakness of insurgency that it occupies a false position due to its adhesion to the old in principle, while breaking away from it in matters of detail. If the whole antecedent scheme with its logic and methods is overthrown, the new is no longer insurgency, but a rival scheme with its own logic and data. Such a reconstruction stands ahead of us, but is not yet realized in any field. The insurgents still regard themselves as economists, sociologists, moralists, or philosophers, depending on the discipline, education, or consciousness of kind that binds them to the group in which they find themselves.

As insurgents, each group of objectors is bound to fail. It is only as they get outside of the narrow precincts of their special sciences and unite on a common platform that they can drive home the changes in social thought in which all are interested. Virtually the same contest is to be found in every field. Under different names the same ideas are being enunciated, and they all express, each in his own way, the opposition to traditional thought upon which their insurgency is based. I have been fighting for twenty years as an insurgent in economics. It is interesting to see the ways in which the conservatives have fought off the change that must inevitably come. They have yielded just enough to avoid defeat, and yet managed to hold every essential doctrine in their creed. Several times I thought their position was undermined, but each time, through a new alignment and the seizure of new terms to express old ideas, they have won a victory. This is the inevitable result of fighting old thought with its own weapons. The insurgent stirs up a temporary commotion, but finds that no permanent change follows.

My present interest has been aroused by finding that the pragmatists have within the camp of the philosophers been fighting the same battle that I as an economist have fought with my colleagues. And I believe that if they fight with philosophic tools and accept its precedents they will suffer the defeat that other insurgents have met. The grip of intellectualism is too strong to be broken by guerilla warfare. Only when the insurgents break the bonds that hold them to their various groups and unite on common grounds can they avoid the detailed defeat that each group by itself must face. We need a new social science, a new philosophy, and a new mental discipline which will face the facts of to-day without the presuppositions the old thought imposed.

To face these problems successfully demands a clear enunciation of the principles on which knowledge depends. Knowledge is either a structural problem based on certain data, or it is a genetic problem, in which case its social origins must be laid bare. I say *social* consciously, because the mass of our knowledge we derive at second hand from the society of which we are members. Acquired knowledge is not a part of our heredity nor is its data ever fully presented to the senses. Each generation impresses its thought, language, and civilization on the next. The social process on which the continuation of this knowledge depends is outside of individuals and acts according to its own laws. A child growing up in such a society has his ideas shaped and the content of his knowledge determined by the contrasts and agreements which the social process presents and enforces. The mass of our knowledge is derived from our civilization and not from personal experience. The testing of acquired knowledge by individuals is incomplete, and could not of itself be made the basis of its reliability.

At this point, I wish to give a definition which, if accepted, will do much to clear away the confusion that exists. *Truth is a judgment about acquired knowledge.* Each person, as he is incorporated into society, has presented to him for acceptance the social knowledge upon which civilization depends. If he doubts the individual who imparts it, to him it is a lie. If he doubts the correctness of the social process by which knowledge is passed along in society, the imparted information is regarded as an error. Errors are social; lies are personal. Together they make up the data that are contrasted with truth.

This definition of truth conforms closely to social usage, although narrower than that given by philosophers. It has the advantage of confining truth judgments to one type of knowledge and thus enables us to set up definite criterions for its determination. All knowledge, however, is not acquired. In addition to the social process, there are two natural processes, the sensory process that gives us *facts* and the motor process that gives us *values*. If we limit truth judgments to acquired knowledge, knowledge is divided into three parts, each of which is given by a separate process. Truth judgments are made of the content of the social process; fact judgments are made of sensory material and value judgments depend on motor data. In every-day usage as well as in philosophic discussion, these distinctions are disregarded, but with a loss of clearness. Do we, for example, add anything to a fact by calling it a true fact? We may be uncertain whether a given sensory presentation is a fact or not, but the judgment we make is a judgment not of its truth but of its clearness and simplicity. Facts are the elements of our direct knowledge and always depend on the evidence of the senses. The mistakes we make in this regard only become truths or falsehoods when society acts on them and they thus become a part of the social process.

Values as contrasted with sensory facts are evidence of motor activity. They are judgments about the means to ends. There can be no values without ends towards which activity goes out. Utility and value are not the same, although closely related. If there is no obstacle to the acquisition of an object, it would have no value even if it had great utility. A free good, though enjoyable, has no value. From another viewpoint, a value is an economy of effort. We tend towards that form of activity that gives the greatest return for the least effort. A mode of action that reaches ends by the most available route is valuable to the actor and through it beliefs are generated that impel the act. Values expressed as judgments are beliefs. We have faith only in what we have done or in what society assures us can be done.

All knowledge is thus either truths, facts, or values, each of which is the product of a separate process. Imparted knowledge is truth, perceived knowledge is fact; knowledge acted on is value. Can we reduce these classes further and thus reduce all knowledge to an ultimate test? This is the problem on which present discussion turns. It is also evident that some simplification can take place, because truth (acquired knowledge), while carried along by the social process, must have had some origin outside of it. It is easy to see how knowledge of this kind is carried along from generation to generation and imposed on each individual in turn, but this does not account for it. The original data out of which truth arose could not have been gained from the social process itself, but must have come from one of the natural processes through which alone direct contact with nature is given. Truth in its origin must either have arisen from sensory perceptions and hence derived from facts, or it must be based on the motor activity that it generates and hence be a value. Is the test of truth antecedent facts or subsequent activity aroused by its perception? This is the problem that divides philosophers into hostile camps.

In this statement of the truth problem I have not tried to present anything new. What I have sought to do is to define truth in a way that makes a decision possible. If truth is defined as a value or as a fact, the definition determines what truth is and ignores a great mass of knowledge not coming clearly under either head. The social process gives us most of our knowledge, and about it our truth judgments are made. Is it not better to define truth in terms of this acquired knowledge and thus leave open the question whether it depends on sensory facts or motor consequences? Both of the disputants would thus have a fair chance to prove they were right by successfully accounting for acquired knowledge.

To decide this question we must put ourselves in the attitude of a child who gets his knowledge from others, rather than in that of an investigator who tries to face nature directly. The power to investigate comes after society has given to the investigator the main data passed on from generation to generation by the social process. Judgments about what we receive from others are made earlier than those we make about our direct relations to nature. What tests, therefore, can we set up in relation to this acquired knowledge which comes to us certified by our elders, superiors, and teachers? In my opinion, the primary test of knowledge derived from others is the logical test of consistency. If two things told us are consistent, we accept them. If they disagree, we reject one of them. Logic is our most frequently used test of truth. By it we determine what we can assimilate and what we must reject. But it is not our only test: A second test is to be found in its origin of ideas. That which several judgments have in common is more firmly established than that which depends solely on its consistency. Consistency relates to the content of what others give us: agreement is the relation between what we now get from others and the body of experience and knowledge already acquired. We judge our present acquisitions of knowledge by that already assimilated and made a part of ourselves. The truth is thus at first judged by its consistency and then by its agreement with earlier knowledge. In this way we get a primary and a secondary test of truth, and through them we judge the great mass of acquired knowledge given to us by our predecessors.

While, however, consistency and agreement are our most commonly used tests of truth, they are not its final test. The end of knowledge is activity. For knowledge to become truth it must guide the recipient in the acquisition of desired ends. All new or dynamic truth is reached in this way, and to the test of workableness all truth must finally come. It is only the static, imitative element in society who are never conscious of using this test. They are so thoroughly socialized that they take what society gives and never question its authority. A static thinker is conscious only of testing the logical character of his thought. He can neglect the test of activity only because the knowledge he accepts has been tested so many times by the activity of his predecessors who have already made static knowledge logical and harmonious. He who goes beyond the accepted social beliefs of his day must also go beyond mere consistency and face nature through his activity. The final test of truth is thus the action it evokes. Belief is truth transformed into motive, and motive generates the will-power to reach its ends. Belief, truth, and action are thus bound together, and all of them are tested by the consequences they bring.

The preceding discussion assumes that knowledge is derived from three processes, each of which has its own test and criterion of correct judgments. The social process puts us in contact with society and enables us to appropriate its accumulations and products. The psychic process gives to us the facts of perception upon which our knowledge of the external world is based. The motor process promotes adjustment and gives value to all workable knowledge. Truth, facts, and values are the three elements of knowledge, each certified to by its special process. Dogmatism consists in the attempt to make some one of these tests absolute. A monistic standard means the denial of the other two, and to get this unity skepticism must first be employed to discredit other standards. Social dogmatism accepts the traditions of society and will accept nothing as truth but what is based on authority. Psychic dogmatism takes perception as its ultimate criterion, and rejects all social data not derived from psychic phenomena. This, if carried to an extreme, is radical empiricism. Structural dogmatism accepts principles as its ultimates, and builds up the universe out of them. This, when fully worked out, becomes transcendentalism. Motor dogmatism makes values the basis of knowledge, and rejects all doctrines that fail to meet the test of activity. All these creeds are plainly defective if knowledge is not derived direct from nature, but comes to us as products of three coordinate processes. While skepticism may confuse, each of these processes will in the end make valid its claims, and thus put the various kinds of knowledge on terms of equality. Truth is not a perception, but a judgment on socially imparted data. Facts are not truth, but are perceptions certified to by our sensory mechanisms. Values, likewise, are results of our motor inheritance, and get their validity from the series of successful adjustments through which our heredity was built up.

Reality and truth are not identical, but are distinct problems. Truth is the product of a process. Reality is antecedent to all processes, and can not be derived from any one of them. Do the ultimates of our knowledge correspond to the ultimates of reality? This is a vital problem, but it is not the same as the problem of truth, which, when correctly put, asks: Shall I or shall I not accept the knowledge derived from others and certified to by them? An answer is demanded to both these questions, but only confusion can arise from trying to blend them into one or from attempts to settle both of them by the same data.

It is the answer to the second question that brings pragmatism and social science into harmony. If truth is not a perception but a judgment of acquired data, its discussion involves all the problems that lie back of social science. On the other hand, as social science leaves behind the data of its concrete sciences and looks into the processes by which its facts are given, the social scientist must become a philosopher and treat the antecedents of knowledge as well as its manifestations. A simple but united viewpoint can thus be obtained which will blend the various groups of insurgents into one body, with one method and one measure of truth. Pragmatism must become more than pragmatism to succeed, for the truth relation can not be settled apart from other fundamental problems that recent progress has forced modern thought to face. Pragmatism, sociology, economics, and history are not distinct sciences, but merely different ways of looking at the same facts. The logic, the method, and the mode of verification are the same in all of them. They all must accept consequences as the ultimate test of truth, and these consequences are measured in the same broad field of social endeavor. To gain this end, the intellectual reliance on premises must be broken. There is thus a clear issue between the new and the old. Is truth measured through its consequences or through its antecedents? Is thought static or dynamic? Is the mind a structural unit or a genetic growth? Shall investigation proceed positively from data or skeptically from analysis and differentiation of ideas? In different terms and in many ways these questions are being asked. They all lead back to a common ground and demand the same solution. When they are answered, human thought will have advanced into a new stage and the obstacles to social progress will be much reduced.

SIMON N. PATTEN.

UNIVERSITY OF PENNSYLVANIA.

DISCUSSION

EXISTENCE AND FORMAL LOGIC

IN this JOURNAL for August 31, 1911, Professor Marvin propounds a new definition of the notion of "existence" in "terms of formal logic." He arrives at this by means of an analysis of the distinction between the propositions that constitute formal or "non-existential" science and those that constitute factual or "existential" science—a procedure which perhaps has a certain *prima facie* appearance of circularity. The definition thus reached I am not sure that I correctly understand; taken literally it appears to be either tautological or else inclusive of its own negation. It runs as follows: "The existent is the asserted sufficient condition of any true proposition; and accordingly a term is said to exist when it is a member of a proposition that is the asserted sufficient condition of some true proposition." By a "sufficient condition" of a proposition the context indicates that Professor Marvin means a proposition which is so